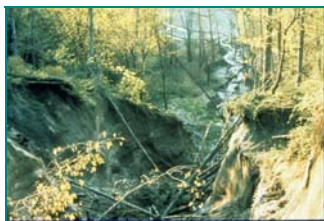
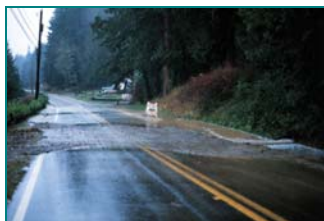




*Controlling stormwater runoff flows protects both stream habitat and clean water.*



# Focus on Stormwater Flows

from Ecology's Water Quality Program

## Why Control Stormwater Runoff Flows?

- **Healthy streams require both clean water and stable stream channels**  
Stormwater runoff from developed areas enters streams at higher flow rates for longer periods than from undeveloped areas. Local research shows that even a small amount of development affects stream channels and adds pollution. Although stream channels change as land cover changes, once a watershed's developed land area stays relatively constant, stream channels may stabilize.
- **Flow controls protect stream channels and habitat from damage**  
High flows damage stream channels and habitat by increasing the rate of channel erosion. The flow control requirements in the western Washington municipal stormwater permits help protect large woody debris from washing away and keep pools from filling with sediment. Fish and other aquatic life need these diverse features to feed and spawn and protect them from predators. Extreme high flows do not meet the Clean Water Act standard of protecting the "beneficial uses" of Washington's waters.
- **Stormwater flows can cause problems in areas that have already been developed**  
In many areas of western Washington, existing stormwater systems do not properly manage the high flows. Stormwater washes over the paved areas, picking up pollutants before moving into stream channels. Stormwater flows from previous land uses have eroded streambanks and damaged habitat and continue to do so.

Some cities and counties are already using the current flow control requirement in the Ecology manual for western Washington to protect stream health, protect property, and provide public safety from flooding. Some people call current flow control requirements the "forested" or "natural" conditions.

## Why does Ecology require flow control at redeveloped sites in western Washington?

In developing permit conditions, Ecology considered the following three options for flow control requirements for redeveloped areas:

- Allow runoff flows to remain the same as those on the existing site. This would maintain the status quo which probably contributes to ongoing stream channel and habitat damage.
- Require basin plans or stormwater system upgrades to correct high flows. Local governments may develop strategies for individual watersheds to establish flow controls. Local governments may also control high flows from existing development through a program to retrofit and upgrade public stormwater systems. This approach has a high price tag for taxpayers.

- Take a gradual approach to controlling flows as opportunities arise for redevelopment projects. Require sites to meet the current flow control requirements as redevelopment occurs. This option helps stop harm and corrects high stormwater flows. The flow control requirements apply to new paved areas and to replaced impervious areas at certain thresholds of cost and scale — similar to bringing a remodeled building up to current health, fire, safety, and building codes. Ecology selected this option for the western Washington municipal permits because doing nothing is not an option, retrofits are very expensive, and this approach makes gradual improvements where construction work will be going on anyway.

## **What flexibility do Ecology permits include for flow controls?**

- Flow control requirements apply to replaced impervious surfaces only when they exceed specific cost and scale thresholds. For example, if the redevelopment project uses the existing building footprint and resurfaces only the existing paved areas, the flow controls do not apply to the site.
- Flow control requirements do not apply to projects that are ‘vested’ under older stormwater standards.
- Local governments can match flows from the existing site in some highly urbanized areas. This applies to drainage basins that have had more than 40 percent of covered in impervious surfaces for more than 20 years.
- The permits do not require flow controls for some sites that discharge directly to large water bodies.
- A local government may grant exceptions to the flow control requirement for instances of undue hardship based on cost or specific site conditions.
- Local governments may develop a strategy for controlling flows in individual watersheds for existing and new development.
- Local governments may use an alternative flow control requirement in areas with regional stormwater facilities that control flows.

**Flow control and runoff treatment requirements in Ecology’s western Washington municipal stormwater permits manage the quantity and quality of stormwater runoff to promote healthy streams for fish and other beneficial uses. Protecting flows will play a key role in recovering salmon and protecting Puget Sound.**

Ecology permits give local governments time to phase in the flow controls:

- 18 months for phase I jurisdictions (King, Snohomish, Pierce, and Clark counties and the cities of Seattle and Tacoma).
- 30 months for phase II jurisdictions (81 cities and 5 counties in western Washington).

For general information about the flow control requirements, please contact:

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